

# COAL NONFATAL

UNITED STATES

DEPARTMENT OF LABOR

MINE SAFETY AND HEALTH ADMINISTRATION

District 5

REPORT OF INVESTIGATION  
(UNDERGROUND COAL MINE)

NONFATAL COAL OUTBURST

Virginia Pocahontas No. 3 Mine (ID No. 44-01520)  
ISLAND CREEK COAL COMPANY  
Vansant, Buchanan County, Virginia

January 12, 1988

by

Preston J. Messer  
Coal Mine Inspector (Roof Control)

Ronald L. Blankenship  
Coal Mine Inspector

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DENVER, CO 80225

Originating Office - Mine Safety and Health Administration  
P. O. Box 560 — Wise County Plaza, — Norton, Virginia 24273  
Kenneth T. Howard, District Manager

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## Abstract of Investigation

U.S. Department of Labor  
Mine Safety and Health Administration

**Authority**—This report is based on an investigation made pursuant to the Federal Mine Safety and Health Act of 1977, Public Law 91-173, as amended by Public Law 95-164.

## Section A—Identification Data

1. Title of investigation: Nonfatal Coal Outburst	2. Date MSHA investigation started: January 12, 1988
3. Report release date: 4-10-88	4. Mine: Virginia Pocahontas No. 3
5. Mine ID number: 44-01520	6. Company: Island Creek Coal Company
7. Town, County, State: Vansant, Buchanan County, Virginia	8. Author(s): Preston J. Messer & Ronald L. Blankenship

## Section B—Mine Information

9. Daily production: 5000	10. Surface employment: 57
11. Underground employment: 250	12. Name of coalbed: Pocahontas No. 3
13. Thickness of coalbed: 60 - 72 inches	

## Section C—Last Quarter Injury Frequency Rate (HSAC) for:

14. Industry: 11.89	15. This operation: 13.08
16. Training program approved: July 2, 1985	17. Mine Profile Rating: N/A

## Section D—Originating Office

18. Mine Safety and Health Administration Coal Mine Health and Safety District No. : 5	Address: P.O. Box 560, Norton, VA 24273
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## Section E—Abstract

On January 12, 1988, at 5:30 a.m., the 5th South, 8th Development longwall at the Virginia Pocahontas No. 3 Mine, experienced a coal outburst of the longwall block near the tailgate. One person, Danny Blankenship, shearer operator, received minor injuries from the outburst.

## Section F—Mine Organization

Company officials:	Name	Address
19. President:	S. Bud Ogden	P.O. Box 11430, Lexington, KY 40501
20. Superintendent:	Eddie Ball	Drawer L, Oakwood, VA 24631
21. Safety Director:	McDonald Hagy	Drawer L, Oakwood, VA 24631
22. Principle officer—H&S:	Danny Deel	Drawer L, Oakwood, VA 24631
23. Labor Organization:	UMWA	Gen. Del., Oakwood, VA 24631
24. Chairman—H&S Committee:	Roy S. Farmer	Box 188, Oakwood, VA 24631

## COMMENTARY

On January 12, 1988, at 12:01 a.m., the South longwall crew, under the supervision of Jimmy Stiltner, longwall foreman, entered the mine and traveled to the active section. Approximately 12 feet of coal was mined from the longwall face prior to the accident occurring. At the time of the outburst, 5:30 a.m., Danny Blankenship and Clifford Owens, shearer operators, were in the process of cutting the longwall face. The shearer was located about 12 feet from the tail entry. Blankenship and Owens were located in shields 116 and 114, respectively.

Owens was not injured; however, Blankenship received bruises to the head and neck area. He was found lying on his side in shield 114. Blankenship was transported to Buchanan General Hospital where he was treated and released. MSHA and State officials were notified and an investigation was started the same day.

## DISCUSSION AND EVALUATION

The investigation revealed the following factors relevant to the occurrence of the accident:

1. This mine is located in the Pocahontas No. 3 coalseam and averages about  $5\frac{1}{2}$  feet in height. The floor in the bump area was dense sandy shale of undetermined thickness that resisted heaving. The immediate roof was a strong sandy shale overlaid by shale interspersed with sandstone with the overlying strata being approximately 2,000 feet in thickness.

2. As a result of a fatality caused by an outburst of a pillar adjacent to the tailgate entry in a sister mine, Beatrice, Island Creek Coal Company's development plans for longwall mining were modified in this mine in March 1976. The change resulted in an 80-foot load bearing pillar, previously developed adjacent to the tailgate entry, being developed in the middle of the development panel, with a 30-foot by 80-foot yielding pillar being located adjacent to the tailgate entry. The modified development plan was used in the 7 development panel area where this outburst occurred and is shown on the attached portion of mine map. An outburst occurred in the adjacent 6 development off 5 South mains entries during mining of the intervening panel between 6 and 7 developments. The location was approximately 650 feet in by this

outburst location. The company has further modified development projections for longwall mining to include a load bearing pillar, 180 feet by 120 feet in dimension, in the middle of the development panel. This latest development plan is shown on the attached portion of mine map, 8 development panel.

3. At the time of the outburst, the longwall face was located approximately 20 feet in by survey station 6784. The U. S. Bureau of Mines was monitoring pressure, pillar dilation, and convergence in the No. 7 development panel entries. Research revealed that the load bearing pillars became overstressed and failed prior to the occurrence. Failure of the chain pillars resulted in additional pressures being placed on the longwall face adjacent to the tail entry. The U. S. Bureau of Mines is continuing research in the 8 development panel. Additional data is to be collected on the latest development design to evaluate performance and load bearing capacity. Such research will provide data to assist in design decisions for future development.

4. Water was being infused into the coal to lubricate the block so pressures would be released gradually.

5. As a result of the outburst, precautions were implemented as follows:

a) A longer remote control cable - 60 feet in length - for the shearer control station was installed and is being used by shearer operators when mining coal adjacent to the longwall tail entry. During this cut-out process, other mining personnel are not permitted in the area.

b) The tailgate cut-out process is being conducted at a slow rate so an outburst will not be induced by the shearer itself.

c) The tailgate end of the coal block will be advanced at least 10 feet ahead of the rest of the face when possible.

#### FINDINGS OF FACT

1. There were no violations of Title 30 CFR observed which contributed to the accident.

2. A 103K Order was issued at 9:40 a.m. stating that the 5th South, 8th Development longwall face had experienced a coal outburst near the tailgate.

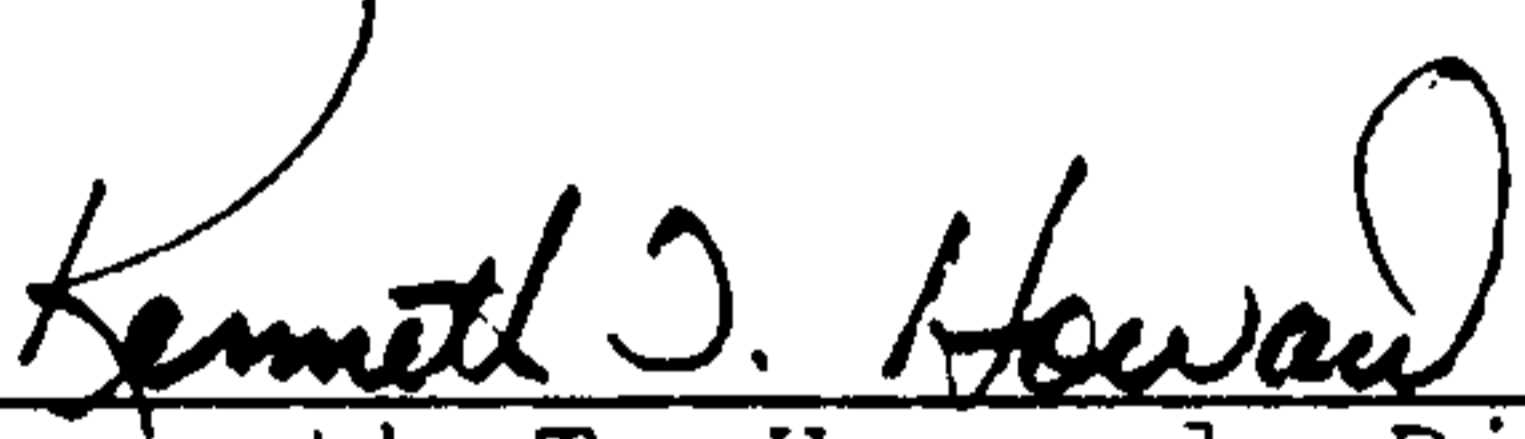
### CONCLUSION

The accident occurred because the natural conditions were conducive to bumps and the load bearing pillars adjacent to the tailgate entry became overstressed and failed. This shifting of weight to the longwall block produced a stored energy. As the overburden pressures were applied and the longwall face approached this area, a sudden release of energy resulted in the outburst.

Preston J. Messer

Ronald L. Blankenship

APPROVED BY:

  
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Kenneth T. Howard, District Manager

## APPENDIX

List of persons furnishing information and/or present during the investigation.

### ISLAND CREEK COAL COMPANY OFFICIALS

Ken Price	Manager of Mines
Rufus Fox	General Superintendent
Eddie Ball	Mine Superintendent
Jim Mullins	Longwall Coordinator
Mike Gauma	Manager of Mining Engineering
Freddy Payne	Mine Foreman
McDonald Hagy	Manager of Safety
Jimmy Stiltner	Longwall Foreman
Danny Deel	Mine Inspector

### ISLAND CREEK COAL COMPANY EMPLOYEES

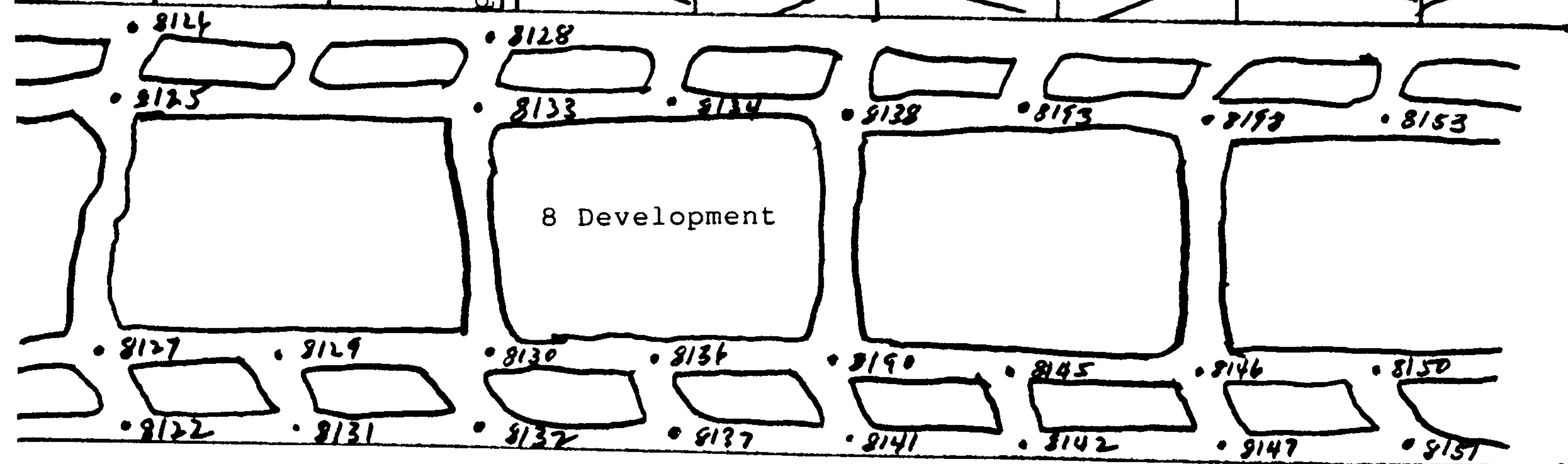
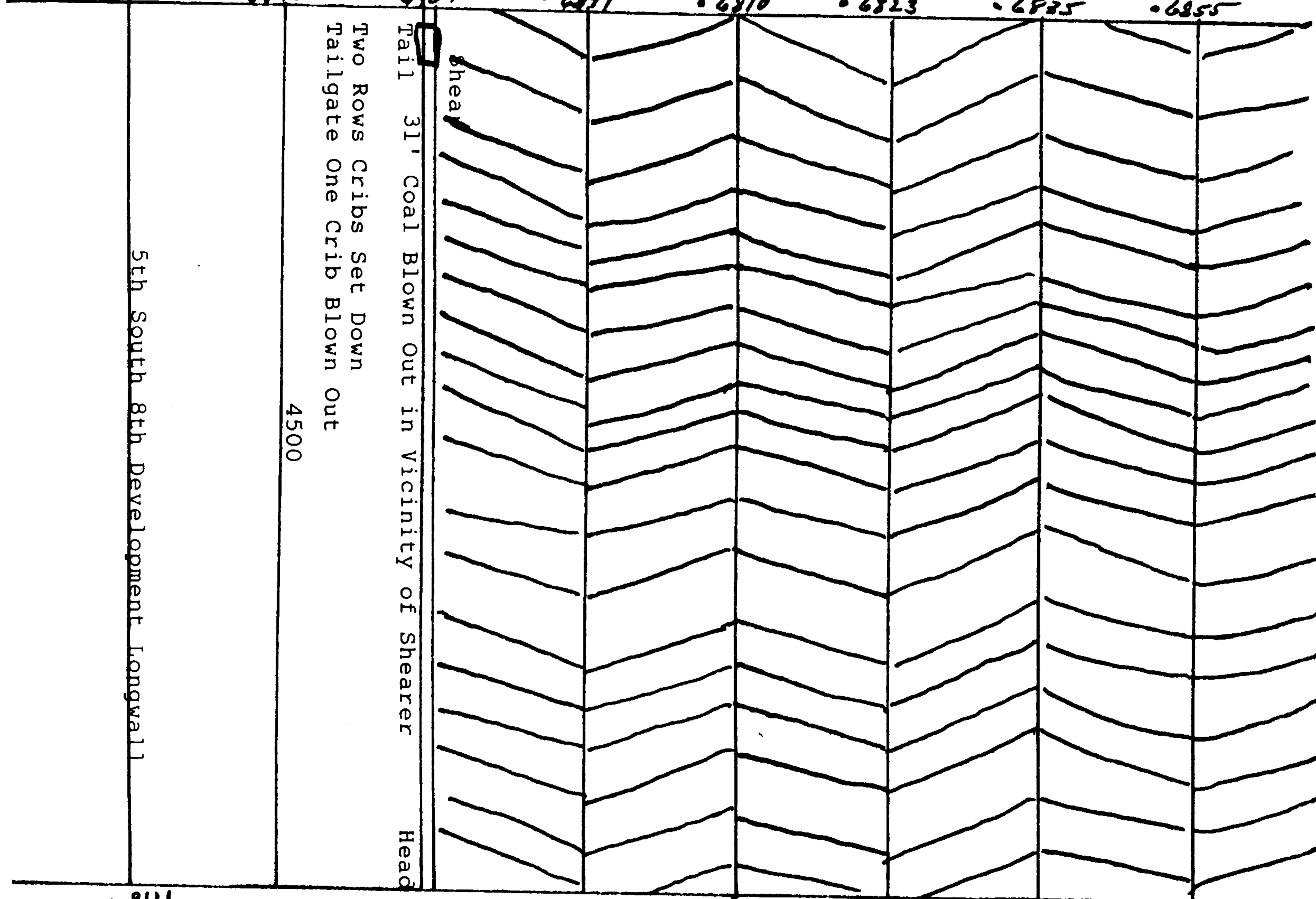
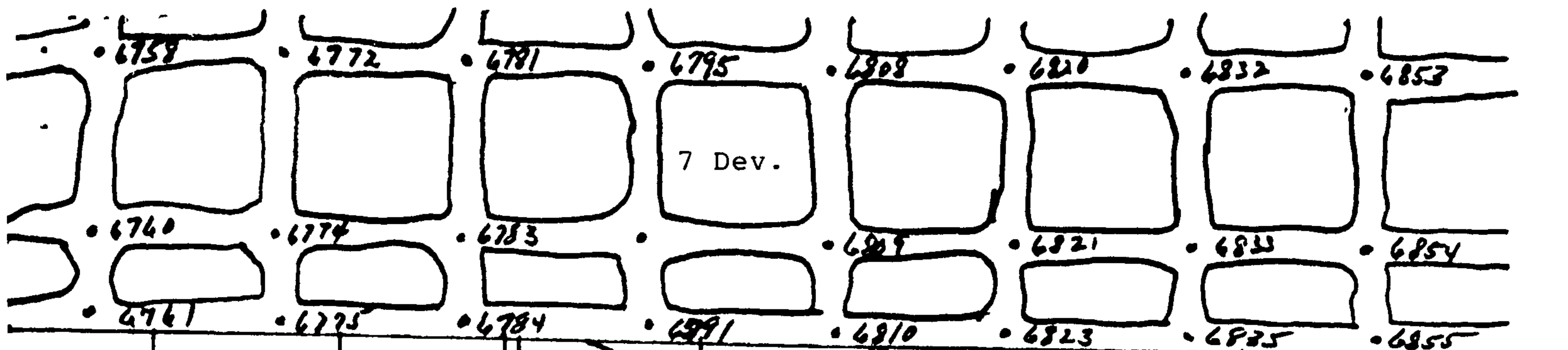
Danny Blankenship	Longwall Shear Operator
Steve Davis	Longwall Jack Setter
Clifford Owens	Longwall Shear Operator

### VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY

John E. Brown	Mine Inspector
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### MINE SAFETY AND HEALTH ADMINISTRATION

James Franklin	Supervisory Mine Safety and Health Inspector
Dillard McGraw	Coal Mine Inspector (Roof Control)
Preston J. Messer	Coal Mine Inspector (Roof Control)
Ronald Blankenship	Coal Mine Inspector



SCALE: 1"=100'